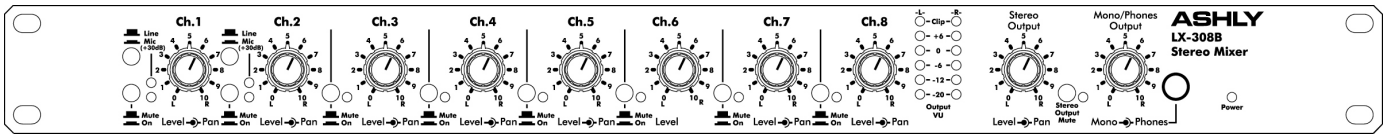
ASHLY

LX-308B

Stereo Line Mixer

Operating Manual



Ashly Audio Inc.
847 Holt Road, Webster, NY 14580-9103
Toll Free (800) 828-6308, Telephone (585) 872-0010, FAX (585) 872-0739
www.ashly.com

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Important Safety Instructions
Consignes de sécurité à lire attentivement

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the device.

Le symbole de la flèche dans un triangle équilateral symbolisant la foudre est prévu pour sensibiliser l'utilisateur à la présence de tension de voltage non isolée à l'intérieur de l'appareil. Elle pourrait constituer un danger de risque de décharge électrique pour les utilisateurs. Le point d'exclamation dans le triangle équilatérale alerte l'utilisateur de la présence de consignes qu'il doit d'abord consulter avant d'utiliser l'appareil.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
6. Do not use this apparatus near water.
7. Clean only with dry cloth.
8. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
9. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
10. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
12. Only use attachments/accessories specified by the manufacturer.
13. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
14. Unplug this apparatus during lightning storms or when unused for long periods of time.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

1. Lisez ces instructions.
2. Conservez ces instructions.
3. Observez les avertissements.
4. Suivez ces instructions.
5. Pour réduire le risque de feu ou la décharge électrique, ne pas exposer cet appareil pour pleuvoir ou l'humidité.
6. Ne pas utiliser l'appareil près de l'eau.
7. Le nettoyer à l'aide d'un tissus sec.
8. Ne pas bloquer les ouvertures de ventilation, installer selon les consignes du fabricant.
9. Eloigner des sources de chaleur tel: radiateurs, fourneaux ou autres appareils qui produisent de la chaleur.
10. Ne pas modifier ou amputer le système de la mise à terre. Une prise avec mise à terre comprend deux lames dont une plus large ainsi qu'une mise à terre: ne pas la couper ou la modifier. Si la prise murale n'accepte pas la fiche, consulter un électricien pour qu'il remplace la prise désuète.
11. Protéger le cordon de secteur contre tous bris ou pincement qui pourraient l'endommager, soit à la fiche murale ou à l'appareil.
12. N'employer que les accessoires recommandés par le fabricant.
13. N'utiliser qu'avec les systèmes de fixation,chariots, trépied ou autres, approuvés par le fabricant ou vendus avec l'appareil.
14. Débrancher l'appareil lors des orages électriques ou si inutilisé pendant une longue période de temps.
15. Un entretient effectué par un centre de service accrédité est exigé si l'appareil a été endommagé de quelque façon: si il a été exposé à la pluie,, l'humidité ou s'il ne fonctionne pas normalement ou qu'il a été échappé.

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This manual uses a *Perpetual Table Of Contents*. Each page has a copy of the manual's contents in a gray box just like this one. The section you are in will always be bold with the other sections "grayed out." The feature allows you to jump directly to another section without having to return to a Table Of Contents page.

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Introduction

Congratulations on your purchase of an Ashly LX-308B stereo line-level mixer. In one compact rack-mount package we have combined features, reliability, and sonic performance you have come to expect from Ashly. Features of this unit include:

- Eight balanced stereo inputs for line level sources
- On/Off switches to all eight inputs
- Peak signal detection on all inputs
- The first two inputs have a switchable 30dB gain for low impedance mics
- Concentric level and pan controls for each input
- Submaster inputs and outputs
- Ultra low-noise summing amplifiers
- 6-segment LED meter arrays
- Separate level controls for stereo, mono, and headphone outputs.

About Ashly

Ashly Audio was founded in 1974 by a group of recording engineers, sound professionals, and electronics designers. The first products were custom consoles for friends and associates, but business quickly grew. The philosophy established from the very beginning holds true today: to offer only the highest quality audio tools at an affordable cost to the professional user – ensuring reliability and long life. More than thirty years later, Ashly remains committed to these principles.

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LX-308B Mixer

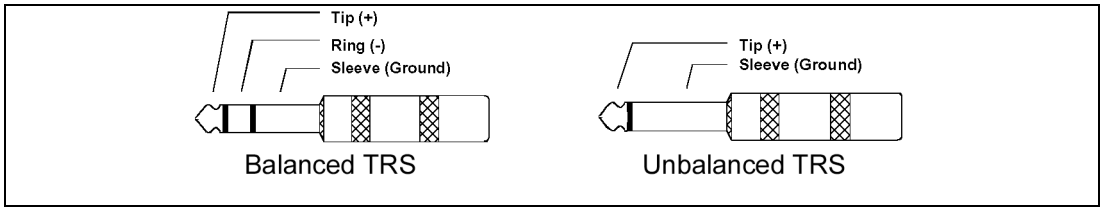
The LX-308B is a versatile rack-mountable mixer capable of supporting the following applications:

- Small Sound Reinforcement
- Church or School Mixing
- MIDI Recording System
- Sub-mixing in a larger system

These applications are discussed in detail on Page 8.

Connectors & Cables

The LX-308B Mixer uses 1/4" TRS connectors for all inputs and outputs. Stereo inputs use two 1/4" TRS jacks per channel, with (+) signal on the tip, the (-) signal on the ring, and ground on the sleeve. If you wish to drive a mono source into the stereo mix, simply plug your signal into the right channel input.



LX-308B Connector Polarities

If low level and high level lines, or if either of these lines and speaker cables are run parallel for long distances, crosstalk may be significant. In fact, the crosstalk can cause an electronic feedback loop, oscillation, and possibly damage to the equipment. To minimize crosstalk, physically separate low-level cables from speaker cables. At any point where cables meet, run low level cables perpendicular to high level or speaker cables. If low and high level or speaker cables must be run parallel and in close proximity to one another, they should be bundled separately.

Unbalanced Connections and Grounding

If you must use unbalanced connectors, the negative lead of the connector should be tied to the ground lead. Using unbalanced connections could result in chassis ground-loop noise. Altering the signal/chassis ground relationship in equipment connected to your unit may eliminate the noise.

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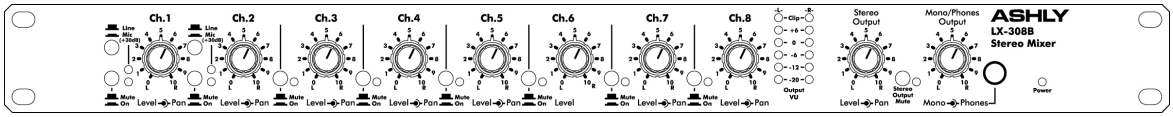
Physical Description

The LX-308B is 1RU, and weighs 10 pounds.

LX-308B Front Panel



1. **Channel Level -** This is the individual channel volume control, which feeds a channel to the main mix.
2. **Channel Pan -** This control adjusts the position of the channel in the stereo mix.
3. **Mic/Line Switch -** This switch on the first two inputs increases the channel input sensitivity by 30 dB to allow the use of low impedance dynamic microphones.
4. **On/Off (mute) Switch -** This switch on each channel will turn the channel completely off allowing the channel level to remain at its desired setting when the input is not needed.
5. **Output Meters -** A pair of peak detecting 6-segment LED meters are used to indicate output level. Green LED's are used below 0 VU, yellow above 0 VU, and red LED's indicate clipping. This meter pair monitors the main stereo output (0 VU = +4dBu). The red clipping LED's also monitor the summing amplifiers, making it possible for these indicators to illuminate even with the stereo output level turned off.
6. **Stereo Output Level -** This is the main master gain, which sets the operating level for the entire mixer. This control does not effect the mono output level.
7. **Stereo Output Mute -** This switch entirely mutes the main stereo output. The headphone and mono output are not affected. This is particularly useful when the LX-308 is used as a sub-mixer.
8. **Mono Level -** This is the master gain control for the mono output, which is the combined signal of the left and right outputs. It has no effect on the stereo output.
9. **Stereo Headphones Level -** This adjusts the volume level of the front panel headphone jack
10. **Power Indicator LED –** When illuminated, indicates that the rear power switch is in the ON position.

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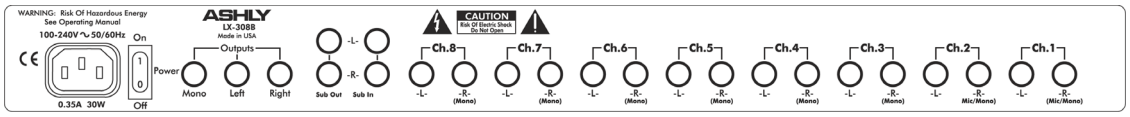
LX-308B Rear Panel



1. **Power Switch -** This switches the AC power to the LX-308B. When switched ON the front-panel LED will illuminate.
2. **Inputs -** The LX-308B stereo inputs use two 20KΩ balanced 1/4" TRS jacks per channel, with (+) signal on the tip, the (-) signal on the ring, and ground on the sleeve. If you wish to drive a mono source into the stereo mix, simply plug your signal into the right channel input. Channels 1 and 2 are switchable to add 30dB gain for low impedance dynamic microphones.
3. **Sub Inputs -** The Sub inputs are nominal 10KΩ unbalanced types on 1/4" TRS jacks. They feed directly to the mix busses at a nominal +4dBu level and are useful for coupling multiple mixers.
4. **Sub Outputs -** The Sub Outputs are unbalanced types on 1/4" TRS jacks. Typically, they will feed sub inputs on additional mixers. Nominal operating level is +4 dBu.
5. **Main Outputs -** Outputs are 200 Ω 1/4" TRS jacks and can be wired balanced or unbalanced. Nominal operating level is +4 dBu and maximum headroom is +22dBu.

Installation

Always switch the unit off before making substantial changes to the settings or connectors. Use four screws and washers when rack mounting. This unit has specific electrical and signal requirements, please take special care to double check all connections and settings and refer to the specifications section of this manual. The unit should be connected to a standard 3-wire grounded electrical outlet supplying 100-240 Volts, 50-60 Hz. To reduce the risk of ground loop hum, connect all audio equipment to the same electrical power source. Removal of the ground pin is both unlawful and dangerous, as a potential shock hazard could result. Overall power consumption is less than 12 watts.

NOTE: The power switch does NOT isolate the appliance from mains. Make sure the mains power socket or an alternative disconnect device is near by and easily accessible. When the product is connected to mains, the line-filter and the input of the fuse are energized.

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Typical Applications

The following information will help you make the most of your new mixer:

Small Sound Reinforcement System

The LX-308B can be used to mix typical sound sources that might be found in a small club, school theater or similar environment. INPUT channels 1 & 2 are used for microphones for live vocal or instrumental pickup. INPUT channels 3-8 are used for the output of electronic music devices such as keyboards, MIDI sound modules, drum machines, etc. The SUB OUT jacks provide feeds to a cassette deck (or any recording device) for making a recording of the mix. The power amplifier (or any additional graphic equalizers or electronic crossovers which may be used) is fed from the MAIN OUTPUT connectors.

Church School or Meeting Room Mixing

The LX-308B can be used to mix sources typically found in a church, classroom, or meeting room. The first two INPUTS are used for microphones for live vocal or instrumental pickup. The third INPUT can be a feed from an electronic keyboard. The remaining INPUT channels are used for audio devices such as film projector or video player, a cassette deck, a CD player, and perhaps even a turntable (with user-supplied RIAA preamp). One input channel is reserved as a spare. The SUB OUT jacks feed a cassette deck (or any recording device) for making a recording of the mix. The power amplifier (or any additional equalizer or electronic crossover which may be used) is fed from the MAIN OUTPUT connectors.

MIDI Recording

The LX-308B can be used to record directly from a MIDI studio setup. INPUTS one and two are from MIDI keyboards. INPUTS 3-6 are from MIDI sound modules, and INPUTS 7 & 8 are from a multitrack tape recorder, synced externally to the MIDI controller. The MAIN OUTPUTS provide a stereo feed directly to a two-track mixdown tape recorder.

Submixer In Larger Sound System:

The LX-308B can be used to provide a mix from the MIDI keyboard setup to the main mixer without tying up a number of channels on the main console. Up to eight INPUTS (more if several LX-308B units are linked) can be "pre-mixed" in stereo. Either the main OUTPUT or the SUB OUT connectors can be used to feed the mixed keyboard signal to the main mixer.

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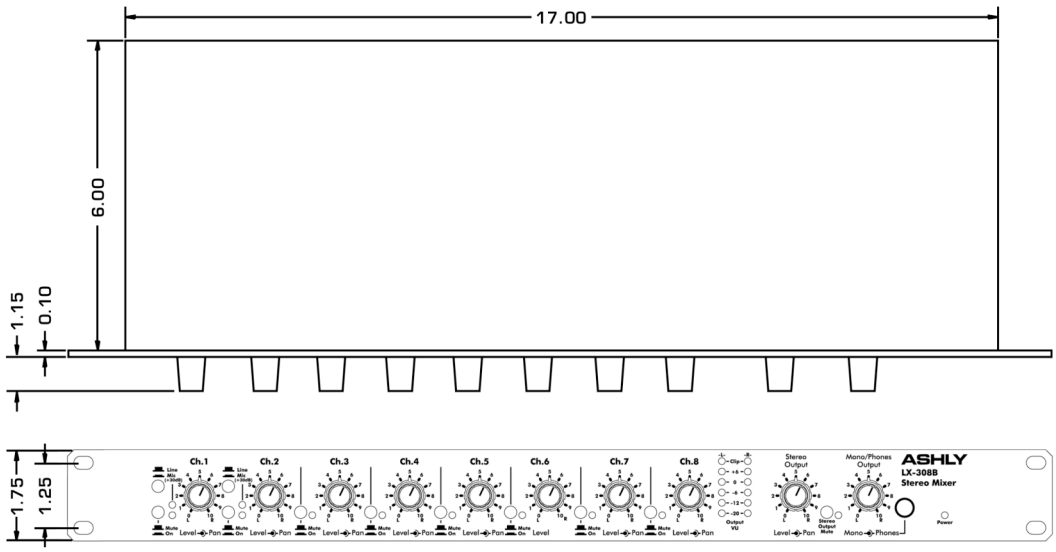
Troubleshooting

Situation	Action
No Sound	Check the AC power. Is the power switch on and illuminated? Check the level meters. If they are operating, either the problem is between the mixer and the later components in the system, or else the Output Mute switches are pressed. If there is no meter activity, check to see you really have an input signal and that it is on the desired channel, or check to see that the meter select switch is set to Left/Right. Check that you have the master gain controls at the desired operating level.
Distorted Sound	Something is being overdriven in the signal path. If the clip indicators are active, reduce the channel level controls. If the clip indicators are still active, reduce the input signal level. If the level meters are constantly in the red, reduce the Master gain and increase the gain of components following the mixer. There are many gain adjustments in the mixer itself and probably several others in other system components which makes it possible to overdrive an input section and then incorrectly try to reduce the gain of the output section. The best way to approach setting gains is to establish the operating level of input stages first by setting their gain as high as possible but leaving about 20dB of headroom for loud peaks, then move on to set the master gain to produce a good meter reading. Proceed to set the gain of equalizers, limiters, crossovers, and amplifiers following the mixer in the same manner, always working toward the later stages of the system.
Excessive Noise	If the noise is in the form of hiss, the problem is usually due to an input stage set up for low gain and then compensating by increasing the master gain. Check that the Pad switch is not enabled unnecessarily. Turn up the channel gain controls and reduce the master gain.
Excessive Hum or Noise	This is usually caused by "ground loops" in the system wiring. A complex sound system with many sources separated by significant distance and using several power outlets has many opportunities for this problem to occur. If possible, feed everything in the system from one power source with a common ground. Use balanced input and output connections between widely separated components.

Note: Unshielded cables, improperly wired connections, and cable with broken strands are the most common problems. Make sure you use good quality cable with connectors soldered firmly on the correct pin. When in doubt, get in touch with your Ashly dealer.

Dimensions

In Inches



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Specifications

SPECIFICATION	LX-308B
DISTORTION	
THD at +20 dBu, 20Hz-20KHz, input switch at -40dB	<0.02%
IMD (SMPTE) at +20dBu	<0.01%
HUM & NOISE (20Hz-20Khz)	
Residual output noise, all levels at minimum	<-98dBu
MASTER OUT, MASTER LEVEL and one INPUT LEVEL at unity gain	<-90dBu
VOLTAGE GAIN (dB ± 1)	
INPUTS or SUB INPUTS to MASTER OUTPUTS (levels at nominal)	0dB
INPUT to MASTER OUTPUT (levels at max)	25dB
Ch.1 or Ch.2 INPUT in MIC position to MASTER OUTPUTS	56dB
SUB INPUTS to MASTER OUTPUTS (master level at max)	18dB
Frequency Response - 20Hz-20Khz	±0.2dB
VU METERS - Two 6-segment LED meters	0VU = +4dBu
PEAK INDICATORS	Peak Clip indicator on each input channel and left and right outputs, illuminates 3dB below clipping
SHIPPING WEIGHT	13 lbs. Maximum
POWER REQUIREMENTS	100-240 Volts, 50-60 Hz, 30 watts

Input Specifications

Input	Balanced/ Unbalanced	Load Impedance	For use w/ Nominal	Max Input before Clip	Connector
Line Inputs 1-2 Line Inputs 3-8	Balanced Balanced	≥ 20K Ω ≥ 20K Ω	600Ω 600Ω	+21 dBu +21 dBu	L & R 1/4" TRS L & R 1/4" TRS
Mic Inputs (1-2)	Balanced	≥ 20K Ω	600Ω	-10 dBu	L & R 1/4" TRS
Sub Inputs	Unbalanced	≥ 10K Ω	600Ω	+22 dBu	L & R 1/4" TRS

Unless otherwise stated, specification conditions are: 150Ω source, all levels set at nominal, outputs into 2.7KΩ or greater

Output Specifications

Output	Balanced/ Unbalanced	Source Impedance	For use w/ Nominal	Output Level Nominal	Output Level Max before Clip	Connector
Master Out (L, R)	Balanced	≤ 200 Ω	10 KΩ lines	+4 dBu	+22 dBu	1/4" TRS
Mono Out	Balanced	≤ 200 Ω	10 KΩ lines	+4 dBu	+22 dBu	1/4" TRS
Sub Out (L, R)	Unbalanced	≤ 200 Ω	10 KΩ lines	-4 dBu	+22 dBu	1/4" TRS

Notes: 1. 0 dBu = 0.775 Vrms 2. Sensitivity is input signal level which will produce +4 dBu out with all levels maximum

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Limited Warranty

Warranty service for this unit will be provided by ASHLY AUDIO INC. in accordance with the following warrant statement.

ASHLY AUDIO INC. warrants to the owner of this product that this product and the components thereof, will be free from defects in workmanship and materials for a period of FIVE years from the date of purchase. ASHLY AUDIO INC. (ASHLY AUDIO) will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

EXCLUSIONS: This warranty does not apply in the event of misuse, neglect or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed. ASHLY AUDIO reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

Any implied warranties which may arise under the operation of State law shall be effective only for FIVE years from the date of purchase of the product. Ashly Audio shall be liable only to correct defects in the product itself, and not for any damage or injury which may result from or be incidental to or a consequence of such defect. Some states do not allow either limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Obtaining Warranty Service in the United States
For warranty service in the United States, please follow this procedure:

Return the product to Ashly, freight prepaid, with a written statement describing the defect and application the product is used in. Ashly Audio will examine the product and perform any necessary service, including replacement of defective parts, at no further cost to you.

Ship your product to:

Ashly Audio Inc.
Attn: Service Department
847 Holt Road
Webster, NY 14580-9103

For units purchased outside The United States of America, service will be provided by an authorized distributor of ASHLY AUDIO INC.

Obtaining Warranty Service Outside the United States For units purchased outside The United States of America, service will be provided by an authorized distributor of ASHLY AUDIO INC.

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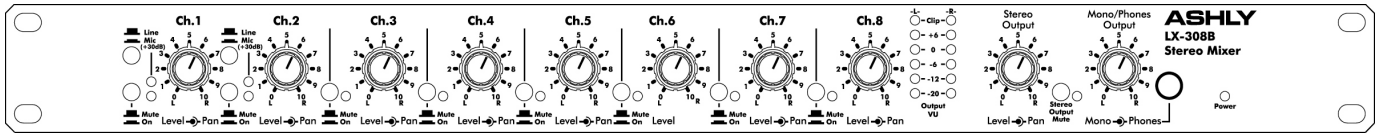

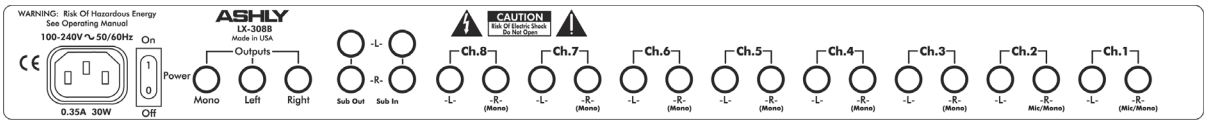

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